PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PC528GQ	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/IB2004/003264	International filing date *(day/month/year)* 06.10.2004	Priority date *(day/month/year)* 09.10.2003
International Patent Classification (IPC) or national classification and IPC G11B23/03, G11B23/00, G11B33/12, G11B33/04		
Applicant SOREMARTEC S.A. et al.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☒ *sent to the applicant and to the International Bureau)* a total of 9 sheets, as follows:
      ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the opinion
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
05.08.2005	01.03.2006
Name and mailing address of the International preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Moje, A Telephone No. +49 89 2399-2701

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/IB2004/003264

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
   - ☐ international search (under Rules 12.3 and 23.1(b))
   - ☐ publication of the international application (under Rule 12.4)
   - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages	
6	as originally filed
1, 1a, 2-5	received on 05.08.2005 with letter of 04.08.2005
Claims, Numbers	
1-7	received on 05.08.2005 with letter of 04.08.2005
Drawings, Sheets	
1-3	as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

* *If item 4 applies, some or all of these sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/IB2004/003264

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-7
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-7
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-7
	No:	Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

   D1 : EP -A- 0 883 126
   D2 : US -A- 2001036148
   D3 : JP -A- 10125026 & corresponding abstract.

2. D1 (cf. in particular Figure 3) discloses an adapter device according to the preamble of claim 1.

2.1 The subject-matter of claim 1 differs from D1 in the features of the characterizing part of claim 1.

2.2 The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

2.3 The problem to be solved by the present invention may be regarded as to further reduce the external dimensions and the weight of the adapter.

2.4 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

Even assuming a combination of D1 with D3 would be envisaged, a device would result which is folded along a single line. D2 is silent on how the device being folded along all of the three lines indicated.

2.5 Claims 2-7 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

An adapter device for optical memory discs having a reduced size, and a promotional article comprising said adapter device

This invention relates to an adapter device of the kind defined in the preamble of claim 1, which makes it possible to use an optical memory disc of the "compact-disc" type having dimensions (external diameter) smaller than a standard size or measure in a read and/or write device.

"Compact discs" have for many years predominated as high capacity memory media, initially as audio-digital media and more recently also as media for data in general.

Compact discs with the greatest variety of contents have been placed on the market for sale as separate commercial products, or as articles distributed in association with other commercial products to promote sales of the latter.

Normal compact discs are manufactured having a standard diameter of 12 cm (4.75"). Correspondingly, read-write devices have a recessed or depressed seat of precisely that standard diameter to receive these compact discs.

In addition to the principal seat having a diameter of 12 cm read-write devices generally have a further seat, which is further depressed, with a diameter of approximately 8 cm. This seat can be used to receive and locate 8 cm optical discs.

Standard read/write devices are not however able to "accept" compact discs having further reduced dimensions.

→ 1a

An adapter device of the initially defined kind is disclosed in EP-A-0 883 126. This prior art document discloses a solution aiming at reducing the size of an adapter ring for a video game CD having a reduced size (3.25 inch rather than the standard 4.75 inch), so that such a CD and the folded adapter ring can be attached to smaller books describing the game. This aim is achieved according to EP-A-0 883 126 by an adapter ring which is folded only once, along a diametrical fold line. In this way the folded adapter ring has a reduced size, and can be attached (together with the reduced-size CD) to a smaller game description book. The size of the folded adapter ring is however not too small, so that the adapter ring and the game description book can effectively protect the CD.

US-A-2001036148 discloses another adapter ring for small-seize CDs. The adapter ring (figure 2A) has three radial fold lines at 120° to one another.

JP-A-10125026 and the corresponding abstract disclose an adapter ring for small diameter disks. The adapter ring has two opposite, parallel chordal portion or sides, which alternate with curved portions or sides. Said chordal portions or sides somehow involve a reduction of size of the adapter ring, which is however outbalanced by the presence of a plurality of projections which protrude radially beyond the circumference to which belong said curved portions or sides of the adapter ring.

→ 2

This invention has been developed in particular, but not exclusively, with a view to allowing the distribution and use of compact discs having reduced dimensions in comparison with the abovementioned standard values, for example having a diameter of approximately 5 cm and a capacity of the order of 10 Mbyte, in particular in association, as promotional articles, with commercial products of small size, in particular food products.

The invention has in particular been developed in order to permit the insertion of such a compact disc of somewhat smaller dimensions in combination with food products, either within the packages for the latter (for example buns, ice-cream or the like), or within the food product itself (for example hollow chocolate products or the like).

This and other objects will be achieved according to the invention through an adapter device, the salient features of which are defined in the appended claim 1.

Promotional articles comprising a compact disc of reduced size and an associated adapter device according to the provisions of claims 6 et sequenter likewise constitute an object of this invention.

Other advantages and characteristics of the present invention will become clear from the following detailed description which is given with reference to the appended drawings which are provided purely by way of non-limiting example and in which:

Figure 1 is a plan view of an optical disc of the "compact disc" type having an external diameter which is less than the standard diameter,

Figure 2 is a plan view of an adapter ring,

Figure 3 shows the adapter ring in Figure 2 in a folded condition,

Figure 4 is a plan view which shows the compact disc in Figure 1 and the folded adapter ring in a mutually juxtaposed relationship,

Figure 5 is a plan view showing a compact disc of reduced size in comparison with the standard dimensions inserted in an adapter device in the operating configuration,

Figure 6 shows an embodiment of an adapter ring according to the invention, and

Figure 7 shows the adapter ring in Figure 6 in the folded condition.

In Figure 1, 1 indicates as a whole a compact disc having an external diameter which is smaller than the standard diameter. This compact disc has for example an external diameter of 5.1 cm, an internal diameter of 1.5 cm and a thickness of 1.2 mm.

Compact discs 1 of reduced size may be manufactured for example by punching or cropping a compact disc of standard

dimensions, in particular from a copy manufactured from a so-called "gold" copy.

In its simplest embodiment an adapter device essentially comprises an adapter ring such as that indicated by 2 in Figure 2 and the subsequent figures.

Adapter ring 2 is manufactured from a flexible material, in particular cardboard, having a thickness of preferably not more than 1 mm.

In the embodiment illustrated in Figures 2 to 5 the adapter ring has an outer perimeter 3 which corresponds to the outer circumference of a standard compact disc, for example having a diameter of 12 cm.

Adapter ring 2 also has an inner perimeter 4 which corresponds at least partly to the outer circumference 5 of compact disc 1.

Adapter ring 2 is folded along predetermined fold lines L1, L2 (Figure 2) in such a way that when in the folded configuration (Figure 3) this ring 2 has a size which is similar to or smaller than the external diameter of compact disc 1 (Figure 4).

In the embodiment illustrated adapter ring 2 is essentially folded in two diametrical directions L1, L2 substantially at right angles to each other in such a way as to form four adjacent segments interconnected at the folds.

Adapter ring 2 is unfolded for use, so that it has the planar annular configuration shown in Figure 2.

Conveniently adapter ring 2 may be provided with adhesive reinforcing means which may be applied thereto in the unfolded operating configuration to prevent any tendency towards resilient return to the folded condition. These adhesive reinforcing means may comprise a self-stick ring (not illustrated) having dimensions which are smaller than or at the most the same as those of adapter ring 2, and which can be applied to one surface of the latter.

As an alternative, the aforesaid adhesive reinforcing means comprise a plurality of self-stick elements or tabs of small size, such as those indicated by 6 in Figure 5, which can be applied to the fold areas of adapter ring 2, straddling the fold lines.

For use the ring and the self-stick elements are conveniently provided with corresponding peelable coatings protecting their surfaces or the self-stick side.

With reference to Figures 6 and 7, in an embodiment outer perimeter 3 of adapter ring 2 has a plurality of portions or sides 3a which extend essentially along the chords of a circumference 7 having a diameter corresponding to the external diameter of a standard compact disc. The perimeter of adapter disc in Figure 6 also has a plurality of curved portions of sides 3b corresponding to arcs of the aforesaid circumference 7. These curved sides 3b alternate with chordal sides 3a. The latter are at right angles to the diametral fold directions L1, L2 in pairs.

As may be appreciated by comparing Figure 7 with Figure 3, the embodiment of adapter disc 2 described above with reference to Figures 6 and 7 makes it possible to appreciably

CLAIMS

1. Adapter device making it possible to use an optical memory disc of the "compact disc" type (1) having dimensions less than a standard dimension or measure,

comprising an adapter ring (2) of flexible material, in particular cardboard, having an outer perimeter (3) which at least partly corresponds to the outer circumference of a standard optical disc, and an inner perimeter (4) which at least partly corresponds to the outer circumference (5) of the said optical disc (1) of a size smaller than the standard size; the adapter ring (2) being folded along a predetermined diametrical fold line (L1, L2) in such a way that when in the folded configuration it presents one dimension which is close to or smaller than the external diameter of the said optical memory disc (1) of a size smaller than the standard size;

the adapter device being characterised in that the said adapter ring (2) is essentially folded along a plurality of diametrical directions (L1, L2) in such a way as to form a plurality of juxtaposed segments;

the outer perimeter (3) of the adapter ring (2) having a plurality of portions or sides (3a), which extend essentially along chords of a circumference (7) having a diameter corresponding to the external diameter of a standard optical disc, and a plurality of curved portions or sides (3b) corresponding to arcs of said circumference (7) having a diameter corresponding to the external diameter of a standard optical disc;

the chordal portions or sides (3a) and the curved portions or sides (3b) of the outer perimeter (3) of the adapter ring (2) alternating with each other; the chordal portions or sides (3a) being, in pairs, at right angles to the aforesaid diametrical fold directions (L1, L2).

2. Device according to claim 1, in which the outer perimeter (3) of the adapter ring (2) has four chordal portions or sides (3a).

3. Device according to any of the preceding claims, also comprising adhesive reinforcing means (6) adapted to be applied to the adapter ring (2) in its unfolded operating condition, and capable of preventing the tendency towards resilient return to the folded condition.

4. Device according to claim 3, in which the said adhesive reinforcing means comprise a self-stick ring which can be applied to one surface of the adapter ring (2).

5. Device according to claim 3, in which the said reinforcing adhesive means comprise a plurality of self-stick elements (6) of small size which can be applied over the fold zones in the adapter ring (2).

6. Article for distribution in association with a commercial product, in particular a food product (31), characterised in that it comprises an optical memory disc (1) of the "compact disc" type of a size smaller than a standard size or measure, and an associated adapter device (2; 6) according to one or more of the preceding claims.

7. Article according to claim 6 further comprising an enclosure (30) capable of containing within it the optical memory disc (1) and the adapter ring (2) in the folded configuration, in a juxtaposed arrangement.